

Today's Topics:

NASA Prediction Bulletins

Date: Sat, 16 Dec 89 18:26:05 EST
From: tkelso@afit-ab.arpa (TS Kelso)
Subject: NASA Prediction Bulletins

The most current orbital elements from the NASA Prediction Bulletins are carried on the Celestial RCP/M, (513) 427-0674, and are updated several times weekly. Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space. This week's elements are provided below. The Celestial RCP/M may be accessed 24 hours/day at 300, 1200, or 2400 baud using 8 data bits, 1 stop bit, no parity.

- Current NASA Prediction Bulletins #614 -

Alouette 1

1 00424U 62B-A 1 89339.86776004 .000000489 00000-0 57472-3 0 2464

2 00424 80.4637 116.6546 0024294 49.7616 310.5649 13.67259080356275

ATS 1

1 02608U 66110 A 89336.18192593 .000000000 00000-0 99999-4 0 829

2 02608 13.3626 15.2628 0003298 329.7603 30.2210 1.00390398 578

ATS 3

1 03029U 67111 A 89339.15000023 -.000000074 00000-0 99999-4 0 2739

2 03029 12.9664 22.7925 0017023 205.0487 154.8559 1.00272475 80856

Cosmos 398

1 04966U 71 16 A 89341.19273157 .00082899 16304-4 50649-3 0 3209

2 04966 51.5278 348.7112 2414789 154.4764 219.8295 10.75174286570769

Starlette

1 07646U 75010 A 89339.87516620 -.000000034 00000-0 20653-4 0 9980

2 07646 49.8252 201.2237 0206197 272.7629 84.9687 13.82125864749048

LAGEOS

1 08820U 76039 A 89340.50131425 .000000005 00000-0 00000 0 0 9408

2 08820 109.8556 289.1071 0044889 279.3213 80.2276 6.38663863 61632

GOES 2

1 10061U 77048 A 89337.29930608 -.000000008 00000-0 00000 0 0 3308

2 10061 7.5759 66.1545 0008329 172.8675 187.0188 1.00278396 7071

GPS-0001

1 10684U 78020 A 89340.47331011 .000000009 00000-0 99999-4 0 2845

2 10684 63.6341 95.5154 0114417 198.2353 161.3531 2.00558396 71985

GPS-0002

1 10893U 78 47 A 89336.44971705 -.000000026 00000-0 00000 0 0 677

2 10893 64.4645 336.4971 0156466 26.2125 334.5949 2.00551633 84724

GOES 3

1 10953U 78062 A 89340.34019413 .000000086 00000-0 99999-4 0 7755
 2 10953 6.4811 68.7875 0005785 235.9586 123.8479 1.00258627 2663
 SeaSat 1
 1 10967U 78064 A 89334.36486287 .00002688 00000-0 98172-3 0 2053
 2 10967 108.0102 269.9985 0002982 272.0304 88.0493 14.35155733597925
 GPS-0003
 1 11054U 78093 A 89337.25357800 -.000000026 00000-0 00000 0 0 1235
 2 11054 64.0024 332.8404 0054429 120.2534 240.3067 2.00564671 81758
 GPS-0004
 1 11141U 78112 A 89337.34948002 .000000009 00000-0 00000 0 0 2369
 2 11141 63.6331 95.4962 0056277 318.9846 40.5935 2.00566154 80455
 NOAA 6
 1 11416U 79 57 A 89339.96310882 .00002089 00000-0 88566-3 0 9401
 2 11416 98.5201 332.1892 0009734 337.8974 22.1953 14.26286213542381
 GPS-0005
 1 11690U 80 11 A 89340.47775022 .000000010 00000-0 00000 0 0 8736
 2 11690 64.1163 97.3828 0111378 203.4877 156.0033 2.00558244 86371
 GPS-0006
 1 11783U 80 32 A 89338.30353859 -.000000026 00000-0 00000 0 0 23
 2 11783 63.8008 332.4150 0143242 60.8575 300.5885 2.00571832 70411
 GOES 4
 1 11964U 80 74 A 89338.16994711 -.000000102 00000-0 00000 0 0 1095
 2 11964 6.0509 71.6694 0030652 103.6094 256.6445 0.99230801 3710
 GOES 5
 1 12472U 81049 A 89338.19634916 -.000000246 00000-0 99999-4 0 7875
 2 12472 2.9760 78.3416 0001044 111.4304 248.2329 1.00267036 30293
 SME
 1 12887U 81100 A 89341.08337243 .00036635 00000-0 10000-2 0 4037
 2 12887 97.6689 13.6175 0003174 14.1376 345.9923 15.37332377451638
 Meteor 2-08
 1 13113U 82 25 A 89337.30940625 .000000442 00000-0 38711-3 0 6793
 2 13113 82.5373 284.3194 0014428 313.4693 46.5259 13.84097726388634
 Salyut 7
 1 13138U 82 33 A 89341.03948526 .00043817 00000-0 76897-3 0 9122
 2 13138 51.6073 186.4764 0001412 168.5690 191.5342 15.50091460434927
 Cosmos 1383
 1 13301U 82 66 A 89339.32717843 .000000230 00000-0 25847-3 0 5223
 2 13301 82.9300 82.8569 0027775 338.4190 21.5788 13.67779571371179
 LandSat 4
 1 13367U 82 72 A 89339.89492494 .00002554 00000-0 57660-3 0 1771
 2 13367 98.1923 40.9446 0003440 39.4822 320.6539 14.57134718393150
 Meteor 2-09
 1 13718U 82116 A 89338.86350137 .000000599 00000-0 30878-3 0 8364
 2 13718 81.2443 114.5697 0054864 233.2902 126.3232 14.13391371359666
 IRAS
 1 13777U 83 4 A 89338.49808616 .000000498 00000-0 37052-3 0 6968
 2 13777 99.0330 173.2000 0011862 201.4624 158.6023 13.98702723 19727
 Cosmos 1447

1 13916U 83 21 A 89325.07446472 .000000273 00000-0 27822-3 0 6617
 2 13916 82.9469 165.9007 0039260 1.0348 359.0875 13.73978341334096
 TDRS 1
 1 13969U 83 26 B 89336.20859286 -.000000205 00000-0 00000 0 0 8857
 2 13969 3.9869 67.4196 0003853 195.2689 164.4209 1.00264057 91109
 GOES 6
 1 14050U 83 41 A 89337.39699042 .000000120 00000-0 00000 0 0 429
 2 14050 1.7397 80.4940 0000351 15.3874 343.7022 1.00261288 8301
 OSCAR 10
 1 14129U 83 58 B 89336.63123568 -.000000082 00000-0 00000 0 0 4438
 2 14129 25.9081 231.0972 6020032 98.1182 330.0455 2.05883572 20686
 GPS-0008
 1 14189U 83 72 A 89339.39104786 .000000008 00000-0 99999-4 0 6874
 2 14189 63.2660 93.9689 0140868 215.8202 143.2321 2.00562740 46876
 Meteor 2-10
 1 14452U 83109 A 89335.89563385 .000000788 00000-0 33320-3 0 7931
 2 14452 81.1611 125.4532 0094733 334.1095 25.5166 14.22464387316386
 LandSat 5
 1 14780U 84 21 A 89339.92286879 .000002702 00000-0 60887-3 0 9924
 2 14780 98.1462 38.6682 0004223 74.1218 286.0891 14.57156493306579
 UOSAT 2
 1 14781U 84 21 B 89340.20803493 .000003902 00000-0 74335-3 0 5646
 2 14781 97.9813 33.8906 0013211 134.6547 225.5760 14.64546019307712
 LDEF
 1 14898U 89344.97288743 0.00111817 83140-3 0 725
 2 14898 28.5037 356.7620 0003270 164.2426 195.9814 15.71276760319061
 GPS-0009
 1 15039U 84 59 A 89337.95586935 .000000008 00000-0 00000 0 0 7708
 2 15039 63.0121 93.2434 0016261 242.5400 117.2973 2.00563365 40128
 Cosmos 1574
 1 15055U 84 62 A 89337.65835200 .000000247 00000-0 25423-3 0 8042
 2 15055 82.9569 206.4119 0027725 144.3847 215.9158 13.73302988273236
 Meteor 2-11
 1 15099U 84 72 A 89332.23676021 .000000550 00000-0 48758-3 0 9835
 2 15099 82.5320 235.8860 0014042 133.2292 227.0040 13.83754125272804
 GPS-0010
 1 15271U 84 97 A 89337.85425918 -.000000026 00000-0 00000 0 0 7318
 2 15271 63.3049 332.0985 0104272 322.4517 36.8399 2.00570597 37231
 Cosmos 1602
 1 15331U 84105 A 89339.52400643 .000005121 00000-0 72585-3 0 1246
 2 15331 82.5360 180.1996 0021996 245.3909 114.5023 14.76710262279495
 NOAA 9
 1 15427U 84123 A 89334.85051203 .000001037 00000-0 58374-3 0 4589
 2 15427 99.1575 325.2179 0014768 202.9466 157.1044 14.12320761255989
 Meteor 2-12
 1 15516U 85 13 A 89337.60942549 .000000297 00000-0 25611-3 0 1341
 2 15516 82.5344 169.9983 0017589 3.8422 356.2867 13.84229014244494
 Cosmos 1686

1 16095U 85 86 A 89340.84606994 .00033608 00000-0 59297-3 0 4314
 2 16095 51.6072 187.4348 0001396 186.7045 173.3646 15.50065581235993
 GPS-0011
 1 16129U 85 93 A 89341.00470119 .000000009 00000-0 00000 0 0 3735
 2 16129 63.7738 93.9797 0120999 149.6914 211.0574 2.00561177 30500
 Meteor 3-1
 1 16191U 85100 A 89337.86430894 .000000043 00000-0 99999-4 0 8764
 2 16191 82.5452 115.7891 0018913 234.8105 125.1245 13.16884596197854
 Meteor 2-13
 1 16408U 85119 A 89337.76089422 .000000414 00000-0 36103-3 0 5510
 2 16408 82.5328 84.7394 0015401 181.2116 178.9008 13.84256964199016
 Mir
 1 16609U 86 17 A 89341.14189793 .00062019 00000-0 83953-3 0 2601
 2 16609 51.6212 216.0061 0003315 132.8621 227.3062 15.57102988218135
 SPOT 1
 1 16613U 86 19 A 89340.99724391 .000000909 00000-0 44505-3 0 6917
 2 16613 98.7229 53.2477 0001457 61.5646 298.5703 14.20026016 36655
 Meteor 2-14
 1 16735U 86 39 A 89337.83671813 .000000291 00000-0 25262-3 0 3395
 2 16735 82.5351 111.5939 0013224 259.7477 100.2193 13.84001042177925
 Cosmos 1766
 1 16881U 86 55 A 89340.21002906 .000005578 00000-0 79557-3 0 8149
 2 16881 82.5251 238.8493 0020397 260.1231 99.7676 14.76482672180664
 EGP
 1 16908U 86 61 A 89332.93418793 .000000006 00000-0 34764-3 0 1573
 2 16908 50.0077 151.6160 0011413 46.5367 313.6416 12.44383300149923
 FO-12
 1 16909U 86 61 B 89332.51013140 -.000000025 00000-0 99999-4 0 1759
 2 16909 50.0174 153.2103 0010997 44.1423 316.0292 12.44403023149867
 NOAA 10
 1 16969U 86 73 A 89341.24517571 .000001194 00000-0 54332-3 0 3137
 2 16969 98.6221 8.3324 0014395 105.3773 254.8994 14.23345303167305
 Meteor 2-15
 1 17290U 87 1 A 89337.57205910 .000000399 00000-0 35120-3 0 3139
 2 17290 82.4682 17.9147 0013611 142.1356 218.0767 13.83820752147040
 MOS-1
 1 17527U 87 18 A 89341.04859150 .000000872 00000-0 67438-3 0 3355
 2 17527 99.1316 50.8787 0000420 127.5710 232.5507 13.94855720142473
 GOES 7
 1 17561U 87 22 A 89338.09744039 -.000000028 00000-0 00000 0 0 3800
 2 17561 0.0271 312.5842 0001563 358.4673 48.9477 1.00209457 3468
 Kvant-1
 1 17845U 87 30 A 89340.82100867 .00011252 00000-0 15887-3 0 9318
 2 17845 51.6198 217.6114 0003793 132.9551 227.2767 15.57087862154357
 DMSP B5D2-3
 1 18123U 87 53 A 89341.13866678 .000001421 00000-0 77052-3 0 4333
 2 18123 98.8226 169.3350 0011677 213.8217 146.2211 14.13747959127260
 RS-10/11

1 18129U 87 54 A 89341.08633354 .000000572 000000-0 61841-3 0 9663
2 18129 82.9251 110.4569 0010620 295.5417 64.4627 13.72038858123109
Meteor 2-16
1 18312U 89340.24526490 0.000000219 18868-3 0 3440
2 18312 82.5547 83.2141 0013655 72.9828 287.2864 13.83560824116301
Meteor 2-17
1 18820U 88 5 A 89339.92196958 .000000216 000000-0 18413-3 0 1767
2 18820 82.5442 144.0867 0016710 143.1581 217.0731 13.84251257 93443
DMSP B5D2-4
1 18822U 88 6 A 89339.74986335 .000001296 000000-0 61345-3 0 3398
2 18822 98.6685 217.5091 0007439 107.7116 252.5803 14.21129184 95345
AO-13
1 19216U 88 51 B 89329.66526591 .000000234 000000-0 37172 0 0 553
2 19216 57.0495 180.6314 6840542 215.8249 68.9355 2.09707370 11120
OKEAN 1
1 19274U 88 56 A 89341.07315025 .000001912 000000-0 27410-3 0 5837
2 19274 82.5176 336.6782 0023287 34.1356 326.1226 14.75886783 76577
Meteor 3-2
1 19336U 88 64 A 89340.66422346 .000000391 000000-0 99999-3 0 3204
2 19336 82.5431 53.6421 0018689 70.7190 289.5870 13.16871564 65613
NOAA 11
1 19531U 88 89 A 89340.07212109 .000001060 000000-0 60677-3 0 1738
2 19531 98.9583 283.4543 0013089 107.6506 252.6094 14.11329601 61720
TDRS 2
1 19548U 88 91 B 89339.26943078 .000000131 000000-0 99999-4 0 573
2 19548 0.0121 223.5886 0002012 17.0638 119.3545 1.00275390 3500
Cosmos 2001
1 19796U 89 11 A 89340.28986503 -.000001104 000000-0 99999-4 0 2816
2 19796 62.9287 117.9437 7183571 319.6002 4.9022 2.00562744 5937
GPS-0014
1 19802U 89 13 A 89338.52075951 .000000016 000000-0 99999-4 0 599
2 19802 55.0741 205.0947 0062145 156.5073 203.8624 2.00560310 5845
Meteor 2-18
1 19851U 89 18 A 89341.07251123 .000000117 000000-0 99999-4 0 1198
2 19851 82.5204 21.5229 0013954 178.2596 181.8626 13.83898438 38994
TDRS 3
1 19883U 89 21 B 89336.91458107 -.000000235 000000-0 99999-4 0 398
2 19883 0.0917 92.3178 0009572 176.2693 91.3288 1.00261923 1922
GPS-0013
1 20061U 89 44 A 89339.20367137 -.000000031 000000-0 00000 0 0 417
2 20061 54.6747 23.7180 0082718 170.2962 189.9183 2.00566282 3607
Nadezhda
1 20103U 89 50 A 89340.13542919 .000000268 000000-0 27549-3 0 555
2 20103 82.9599 67.3052 0036604 214.5819 145.2954 13.73539051 21215
GPS-0015
1 20185U 89 64 A 89339.17425154 .000000016 000000-0 99999-4 0 283
2 20185 54.9345 205.9483 0026354 136.7792 223.5175 2.00569769 6807
Soyuz TM-8

1	20218U	89 71	A	89340.82094528	.00071042	00000-0	95963-3 0	901
2	20218	51.6291		217.6214	0003525	129.4092	230.4572 15.57101782	14346
Cosmos 2038								
1	20232U			89322.32348737	0.00000004		0	263
2	20232	82.5710		125.8639	0010702	238.4398	121.5652 12.65099955	8208
Cosmos 2046								
1	20259U			89326.86071613	0.00017745		29542-3 0	1246
2	20259	65.0309		96.5510	0010497	270.8635	89.2408 15.52083099	8721
Magion-2								
1	20281U			89321.23047500	-.00001059		-33552-3 0	1176
2	20281	82.5944		3.0200	1263875	97.1649	277.4407 12.42778015	6251
1989 084C								
1	20299U			89319.66030688	0.00005136		30662-2 0	296
2	20299	34.2162		136.1180	7090533	18.4605	357.8498 2.49665854	691
GPS-0016								
1	20302U	89 85	A	89340.40327790	-.00000030	00000-0	99999-4 0	357
2	20302	54.7565		324.9164	0037694	305.6987	53.9667 2.00574461	888
1989 085B								
1	20303U			89324.58710368	0.00008650		11234-2 0	264
2	20303	35.6522		154.4783	0337925	337.1459	21.4501 14.47461557	4377
1989 085C								
1	20304U			89325.08364474	0.00163321	10792-4	15949-2 0	587
2	20304	37.7526		301.5327	5986438	226.4190	65.0844 4.17074007	1276
Meteor 3-3								
1	20305U	89 86	A	89340.00979679	.00000090	00000-0	21935-3 0	311
2	20305	82.5515		354.2504	0017370	90.2149	270.1035 13.15843359	5548
1989 086B								
1	20306U			89326.24293298	0.00003177		83495-2 0	414
2	20306	82.5552		3.9545	0017126	121.2901	238.9863 13.16044176	3734
IntelSat 6A								
1	20315U			89331.91798177	-.00000222		10000-3 0	175
2	20315	0.1028		41.6104	0014547	219.5625	98.6861 1.00266854	270
1989 087B								
1	20316U			89341.03139726	0.00005964		41604-2 0	360
2	20316	7.0233		179.2574	7261981	212.2333	68.9029 2.27913743	927
1989 070C								
1	20317U	89 70	C	89335.48769175	-.00000018	00000-0	99999-4 0	172
2	20317	1.5631		288.4330	0233580	229.5139	128.4043 0.98761918	349
Cosmos 2049								
1	20320U			89344.79302047	0.00374641	67474-4	56760-3 0	576
2	20320	64.7754		168.3105	0044588	105.7828	254.8807 16.02210331	3754
COBE								
1	20322U	89 89	A	89340.08122023	.00005549	00000-0	37545-2 0	221
2	20322	99.0250		347.4914	0006420	183.2904	176.8219 14.00544153	2448
1989 089B								
1	20323U			89342.03450756	0.00001989		61643-3 0	121
2	20323	97.0671		347.1041	0080241	232.0495	127.3420 14.40129793	2799
Cosmos 2050								

1	20330U		89344.81017175	- .000000887		29608-2 0	234
2	20330	62.9975	318.5030	7371369	316.4206	4.6236 2.00586289	355
1989 091B							
1	20331U		89345.27242516	0.01473426	38481-4	12186-2 0	308
2	20331	62.8384	255.7415	0156208	121.2735	240.4900 15.92877841	2759
1989 091C							
1	20332U		89344.07629308	0.40913519	44119-4	26618-3 0	399
2	20332	62.9123	259.2420	0033088	110.6690	250.1917 16.50931621	2588
1989 091D							
1	20333U		89344.07161325	- .000000294		-71873-3 0	103
2	20333	62.9826	318.6115	7339899	316.3910	4.7399 2.04183185	343
Cosmos 2051							
1	20334U		89344.79328916	0.00147554		22406-2 0	560
2	20334	64.9073	35.1995	0054525	221.0418	138.5896 15.52130771	2468
Kvant-2							
1	20335U		89343.90136874	0.00076314		10207-2 0	384
2	20335	51.6233	202.1802	0003347	145.6263	214.3114 15.57335735	2107
Molniya3-36							
1	20338U		89344.55175854	- .000000292		-73365-2 0	175
2	20338	62.8245	165.9769	7356535	288.0520	9.5459 2.00603610	254
1989 094B							
1	20339U		89342.13226883	0.000000284		-28141-2 0	135
2	20339	62.7980	166.2619	7391744	288.0344	9.3795 1.96625953	195
1989 094C							
1	20340U		89344.75978996	0.01070046	37338-4	12397-2 0	404
2	20340	62.8101	121.4993	0186489	122.1660	239.7934 15.82699323	1941
1989 094D							
1	20341U		89344.74805755	0.01448067	37487-4	10678-2 0	425
2	20341	62.8238	121.8888	0226767	118.0934	244.3190 15.79393697	1949
1989 100A							
1	20347U		89336.03993528	0.00029041		89388-2 0	44
2	20347	82.6186	353.2764	1217722	61.7842	310.0776 12.52429319	6344
Cosmos 2052							
1	20350U		89344.43792801	0.00953330	28693-4	26500-3 0	310
2	20350	67.1508	248.0091	0096490	63.5856	297.5738 16.16218567	1582
Granat							
1	20352U		89343.99260990	- .000000867		10000-3 0	34
2	20352	52.1160	23.9610	9229690	56.5725	349.5180 0.24391700	47
1989 096B							
1	20353U		89345.30757638	0.00143379	57152-5	10152-2 0	366
2	20353	51.5409	350.8218	1170923	146.7669	221.2676 13.41767979	1278
1989 096C							
1	20354U	89 96 C	89338.99999998	- .000000805	00000-0	99999-4 0	15
2	20354	51.6030	24.1780	9217879	285.2190	280.0690 0.25077369	07
1989 096D							
1	20358U		89345.38268138	0.00140556	56709-5	98748-3 0	113
2	20358	51.5316	350.6049	1172076	146.9485	221.0562 13.41616440	1288

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End of INFO-HAMS Digest V89 Issue #1030
